

Exhibit K to the
Declaration of Imran A. Khaliq In Support
Of Visto's Opening Claim Construction
Brief Under P.R. 4-5(a)

(12) **EX PARTE REEXAMINATION CERTIFICATE (5234th)****United States Patent****Mendez et al.**(10) **Number:** **US 6,085,192 C1**(45) **Certificate Issued:** **Nov. 22, 2005**(54) **SYSTEM AND METHOD FOR SECURELY SYNCHRONIZING MULTIPLE COPIES OF A WORKSPACE ELEMENT IN A NETWORK**

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FOREIGN PATENT DOCUMENTS(73) Assignee: **Visto Corporation**, Redwood Shores, CA (US)

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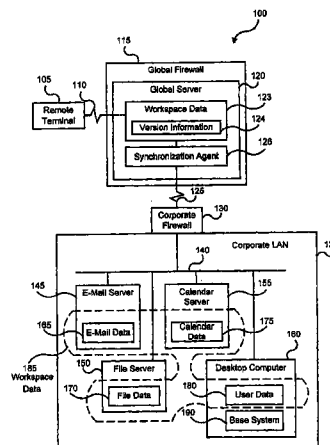
(Continued)

(51) **Int. Cl.⁷** **G06F 17/30**(52) **U.S. Cl.** **707/10; 707/1; 707/9; 707/10; 707/104; 707/203**(58) **Field of Search** **707/1-4, 9-10, 707/203, 200, 101, 102, 103 R; 715/511; 709/201-202, 248-249***Primary Examiner*—Alford W. Kindred(57) **ABSTRACT**

A system includes a general synchronization module at the client site for operating within a first firewall and for examining first version information to determine whether a first workspace element has been modified. The system further includes a synchronization agent at a global server for operating outside the first firewall and for forwarding to the general synchronization module second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified. A synchronization-start module is maintained at the client site for operating within the first firewall and for securely initiating the general synchronization module and the synchronization agent when predetermined criteria have been satisfied. The system further includes means for generating a preferred version from the first workspace element and from the copy by comparing the first version information and the second version information, and means for storing the preferred version at the first store and at the second store.

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EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

ONLY THOSE PARAGRAPHS OF THE
SPECIFICATION AFFECTED BY AMENDMENT
ARE PRINTED HEREIN.

Column 4, lines 20–38:

An operating system **240** includes a program for controlling processing by the CPU **205**, and is typically stored in the data storage device **230** and loaded into the RAM **235** for execution. A service engine **245** includes a program for performing a particular service such as maintaining an e-mail data base, a calendar data base, a bookmarks data base or another file data base, and may be also stored in the data storage device **230** and loaded into the RAM **235** for execution. To perform a service, the service engine **245** operates on service data **250** (e.g., the e-mail data **165**, the file data **170**, the calendar data **175** or the user data **180**), which is typically stored in the data storage device **[250]** **230**. The service data **250** includes version information **255** indicating the date and time of the last modification. The service engine **245** operates to update the version information **255** whenever modifications are made. It will be appreciated that the portion of memory in the data storage device **[250]** **230** which contains the service data **250** is referred to as the service “store.”

Column 4, lines 44–59:

An operating system **340** includes a program for controlling processing by the CPU **305**, and is typically stored in the data storage device **330** and loaded into the RAM **335** for execution. A desktop service engine **345** (i.e., a particular service engine **245**, FIG. 2) includes a service program for managing user data **180** (i.e., particular service data **250**, FIG. 2) which includes version information **350** (i.e., particular version information **255**, FIG. 2). The desktop service engine **345** may be also stored in the data storage device **330** and loaded into the RAM **335** for execution. The user data **180** may be stored in the data storage **330**. As stated above with reference to FIG. 1, the base system **[1 90]** **190** operates to synchronize the workspace data **185** (which includes user data **180**) with the workspace data **123**. The base system **190** may be also stored in the data storage device **330** and loaded into the RAM **335** for execution.

Column 5, lines 35–49:

The synchronization-start module **420** includes routines for determining when to initiate synchronization of workspace data **123** and workspace data **185**. For example, the synchronization-start module **420** may initiate data synchronization upon user request, at a particular time of day, after a predetermined time period passes, after a predetermined number of changes, after a user action such as user log-off or upon like criteria. The synchronization-start module **420** initiates data synchronization by instructing the general synchronization module **425** to begin execution of its routines. It will be appreciated that communications with synchronization agent **126** preferably initiate from within the

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cooperate LAN **[1135]** **135**, because the typical cooperate firewall **130** prevents in-bound communications and allows out-bound communications.

Column 6, lines 15–27:

The content-based synchronization module **430** includes routines for reconciling two or more modified versions in workspace data **123**, **185** of the same workspace element. For example, if the original and the copy of a user workspace element have both been modified independently since the last synchronization, the **[contentbased]** *content-based* synchronization module **430** determines the appropriate responsive action. The content-based synchronization module **430** may request a user to select the preferred one of the modified versions or may respond based on preset preferences, i.e., by storing both versions in both stores or by integrating the changes into a single preferred version which replaces each modified version at both stores.

Column 6, lines 28–41:

FIG. 5 is a block diagram illustrating details of the synchronization agent **126**, which includes a communications module **505** (similar to the communications module **405** described above with reference to FIG. 4) and a general synchronization module **510** (similar to the general synchronization module **425** described above also with reference to FIG. 4). The communications module **505** includes routines for compressing data, and routines for communicating via the communications channel **125** with the base system **190**. The communications module **505** may further include routines for establishing a secure communications channel through the global firewall **[126]** **115** and through the corporate firewall **130**.

Column 6, lines 42–56:

The general synchronization module **510** includes routines for comparing the version information **124** with the last synchronization signature **435**, and routines for forwarding to the general synchronization module **425** version information **124** determined to be modified. The general synchronization module **510** may **[either]** maintain its own last synchronization signature **435** copy (not shown). Alternatively, the request to synchronize from the base system **190** may include a copy of the last synchronization signature **435**. The general synchronization module **510** further includes routines for receiving preferred versions of workspace data **185** workspace elements from the general synchronization module **425**, and routines for forwarding preferred versions of workspace data **123** workspace elements to the general synchronization module **425**.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

Claim **19** is cancelled.

Claims **1–2**, **6–8**, **10–11** and **21–25** are determined to be patentable as amended.

Claims **3–5**, **9**, **12–18** and **20**, dependent on an amended claim, are determined to be patentable.

1. A computer-based method comprising the steps of:

(a) *establishing a communications channel through a firewall using an HTTP port or an SSL port;*

(b) generating first examination results from first version information which indicates whether a first workspace element stored at a first store within **[a]** *the firewall* has been modified;

(b)*c*) generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified, the copy being stored at a second store *on a smart phone* outside the firewall;

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- ([c]d) initiating steps ([a]b) and ([b]c) from within the firewall through the communications channel when predetermined criteria have been satisfied;
- ([d]e) generating a preferred version from the first workspace element and from the copy based on the first and second examination results, wherein if only one of the first workspace element and the copy has been modified, then the step of generating includes selecting the one as the preferred version; and
- ([e]f) storing the preferred version at the first store and at the second store.
2. [The method of claim 1] A computer-based method comprising the steps of:
- (a) generating first examination results from first version information which indicates whether a first workspace element stored at a first store within a firewall has been modified;
- (b) generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified, the copy being stored at a second store outside the firewall;
- (c) initiating steps (a) and (b) from within the firewall when predetermined criteria have been satisfied;
- (d) generating a preferred version from the first workspace element and from the copy based on the first and second examination results; and
- (e) storing the preferred version at the first store and at the second store;
- wherein the second store is on a global server outside the firewall and which is protected by a global firewall.
6. [The method of claim 1 further comprising,] A computer-based method comprising the steps of:
- (a) generating first examination results from first version information which indicates whether a first workspace element stored at a first store within a firewall has been modified;
- (b) generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified, the copy being stored at a second store outside the firewall;
- (c) initiating steps (a) and (b) from within the firewall when predetermined criteria have been satisfied;
- (d) generating a preferred version from the first workspace element and from the copy based on the first and second examination results;
- (e) storing the preferred version at the first store and at the second store; and
- before generating the first examination results, the step of updating the first version information whenever the first workspace element is modified.
7. [The method of claim 1 further comprising,] A computer based method comprising the steps of:
- (a) generating first examination results from first version information which indicates whether a first workspace element stored at a first store within a firewall has been modified;
- (b) generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified, the copy being stored at a second store outside the firewall;
- (c) initiating steps (a) and (b) from within the firewall when predetermined criteria have been satisfied;

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- (d) generating a preferred version from the first workspace element and from the copy based on the first and second examination results;
- (e) storing the preferred version at the first store and at the second store; and
- before generating the second examination results, the step of updating the second version information whenever the copy is modified.
8. [The method of claim 1] A computer-based method comprising the steps of:
- (a) generating first examination results from first version information which indicates whether a first workspace element stored at a first store within a firewall has been modified;
- (b) generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified, the copy being stored at a second store outside the firewall;
- (c) initiating steps (a) and (b) from within the firewall when predetermined criteria have been satisfied;
- (d) generating a preferred version from the first workspace element and from the copy based on the first and second examination results;
- (e) storing the preferred version at the first store and at the second store; and
- wherein if only one of the first workspace element and the copy has been modified, then the step of generating includes selecting the one as the preferred version.
10. A system comprising:
- a communications channel through a firewall comprising one of an HTTP port and an SSL port;
- a general synchronization module for operating within [a] the first firewall and for examining first version information to determine whether a first workspace element at a first store has been modified;
- a synchronization agent for operating outside the first firewall and for forwarding to the general synchronization module second version information which indicates whether an independently modifiable copy of the first workspace element at a second store on a smart phone has been modified;
- a synchronization-start module for operating within the first firewall and for initiating the general synchronization module and the synchronization agent when predetermined criteria have been satisfied;
- means for generating a preferred version from the first workspace element and from the copy by comparing the first version information and the second version information, wherein if only one of the first workspace element and the copy has been modified, then the means for generating selects the one as the preferred version; and
- means for storing the preferred version at the first store and at the second store.
11. The system of claim 10 further comprising a communications module for communicating through the first firewall, wherein the first firewall is positioned between a trusted network and the Internet.
21. A system comprising:
- first means for generating first examination results from first version information which indicates whether a first workspace element stored at a first store within a firewall has been modified;

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second means for generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified, the copy being stored at a second store *on a smart phone* outside the firewall;

means for updating the first version information whenever the first workspace element is modified or updating the second version information whenever the copy is modified;

means for initiating the first and second means from within the firewall when predetermined criteria have been satisfied;

means for generating a preferred version from the first workspace element and from the copy based on the first and second examination results; and

means for storing the preferred version at the first store and at the second store.

22. A computer-readable storage medium storing program code for causing a computer-based system to perform the steps of:

(a) generating first examination results from first version information which indicates whether a first workspace element stored at a first store within a firewall *positioned between a trusted network and the Internet* has been modified;

(b) generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified, the copy being stored at a second store *on a smart phone* outside the firewall;

(c) initiating steps (a) and (b) from within the firewall *through an Internet communications channel* when predetermined criteria have been satisfied;

(d) generating a preferred version from the first workspace element and from the copy based on the first and second examination results, *wherein if only one of the first workspace element and the copy has been modified, then selecting the one as the preferred version*; and

(e) storing the preferred version at the first store and at the second store.

23. A computer-based method comprising the steps of:

(a) *establishing a secure communications channel through a firewall using an HTTP port or an SSL port*;

(b) generating first examination results from first version information which indicates whether a first workspace element stored at a first store within [a] the firewall has been modified;

(c) *before generating the first examination results, the step of updating the first version information whenever the first workspace element is modified*;

([b]d) generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace

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element has been modified, the copy being stored at a second store outside the firewall;

([c]e) initiating steps ([a]b) and ([b]d) from within the firewall when predetermined criteria have been satisfied;

([d]f) determining based on the first and second examination results that both the first workspace element and the copy have been modified; and

([e]g) storing both the first workspace element and the copy at the first store and at the second store, *wherein the second store comprises a smart phone*.

24. A system comprising:

first means for generating first examination results from first version information which indicates whether a first workspace element stored at a first store within a firewall has been modified;

second means for generating second examination results from second version information which indicates whether an independently-modifiable copy of the first workspace element has been modified, the copy being stored at a second store outside the firewall;

means for updating the first version information whenever the first workspace element is modified or updating the second version information whenever the copy is modified;

means for initiating the first and second means from within the firewall when predetermined criteria have been satisfied;

means for determining based on the first and second examination results that both the first workspace element and the copy have been modified; and

means for storing both the first [file] workspace element and the copy at the first store and at the second store, *wherein the second store comprises a smart phone*.

25. A system comprising:

a global server for operating outside a firewall and including memory for storing first workspace data and corresponding first version information; and

a synchronization agent for managing the first workspace data and the corresponding first version information and for communicating with remote clients; [and]

means for updating the first version information whenever the first workspace element is modified;

a remote client for operating within the firewall and including memory for storing second workspace data and corresponding second version information;

means for cooperating with the synchronization agent to synchronize the first workspace data with the second workspace data by examining the first version information and the second version information; and

a synchronization-start module for initiating workspace data synchronization between the global server and the remote client.

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